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August 1, 1944

MOUNTAIN PINE BEETLE SITUATION ON ~~LONGMIRE~~ White River AREA MOUNT RAINIER NATIONAL PARK
July, 1944

Mountain pine beetle control on the White River area was maintained up to and including the spring of 1942 and was then terminated because of discontinuance of the C.C.C. program. This maintenance control work during the thirteen years it was in effect was very successful in holding the pine beetle at low ebb in the White River drainage. Cessation of control has allowed the beetles to build up to a stage where they are again threatening the extensive stands of white pine and also the somewhat scattered white-bark pine.

Current Situation

1944 Survey: During the period from July 18 to 21, inclusive, R. L. Furniss made a detailed survey of the mountain pine beetle infestation within the White River control unit. Infested trees "red tops" were located from lookout points and then most of the trees were visited, counted, and measured.

Number of trees: A total of 328 trees in 21 groups ranging in size from 1 to 56 trees were measured. Forty-four trees in scattered groups were recorded as "red tops" and were not visited. Thus, the actual count, plus the "red top" estimate, totals 372 infested trees. Missed trees would probably swell this total to about 400 trees for the entire area. All trees that were located during the survey are plotted as to approximate location on the accompanying map. Groups that were marked and counted are indicated by letter ("A", "B", etc.); see Table I for a summary of these groups by diameter classes. Estimates based upon "red top" counts are entered directly upon the map.

Types of trees: Two tree species, western white pine and white-bark pine, are involved. Of the total recorded, 310 are white pine and 62 are white-bark pine. Most of the white pines are young-mature and occur in stands containing a relatively high percentage of pine. Except for the large Summer Land group, the white-bark pines are widely scattered in small groups.

Brood Stage: All the trees recorded on the 1944 survey contained overwintered brood of the 1943-44 generation. At the time the trees were marked, most of the brood was in the large larval and pupal stages. A considerable number of new adults were also present, and it is probable that some emergence had occurred. The remaining brood in these trees will soon emerge and, because of this, any control operations that are undertaken will have to be directed against the next generation that will develop in trees that are as yet largely unattacked.

Control Considerations

Values involved: Extensive stands of relatively pure white pine, especially on Sunrise Ridge, are threatened by the developing outbreak. The more scattered white-bark pine occurring at high elevations is likewise endangered. Perhaps more important, the infested white-bark pines harbor a pine beetle population that, if not reduced, will act as a reservoir of beetles that will spread and nullify any control undertaken in the white pine stands. Therefore, control of the infestation in both species should be undertaken as has been done in the past.

Area to be Covered: The White River control unit, originally outlined by Keen in his "Report of the Mountain Pine Beetle Situation in Rainier National Park, Fall of 1930", is a well defined entomological unit offering a good opportunity for successful control. It is important for any lasting benefit that all infestation in both white pine and white-bark pine be cleaned up.

Area Priorities: If there is any question as to priority of approach, the infestation in white pine should be given first attention. This order of attack is dictated by the fact that infestation in white pine is more vigorous and increases more rapidly than in white-bark pine.

Time for Control: Control of the 1943-44 generation is no longer practical. This fall when the new attacks show up would be the best time to begin treatment. By making a start then and concentrating upon the larger and more accessible groups, it should be possible to eliminate the main body of infestation. In the spring the outlying groups and missed trees could be picked up and thus full coverage could be assured. If all the work is postponed until spring, time will work against completion of the entire project. This fall, as soon as the newly attacked trees show up to good advantage, a comprehensive survey should be made so that there will be no lost time next spring in locating the infested trees.

Control Methods

Conditions on the White River are are favorable for the application of control by the oil spraying method and it is suggested that that method be given serious consideration. For details as to this method, reference can be made to the memorandum of July 15 concerning the Longmire area.

Very likely it will be desirable to supplement oil spraying by application of the fell-peel-burn method in the outlying groups and scattered lone trees. Such clean-up work can be carried on to advantage by small crews operating when climatic conditions are such as to minimize any danger of fire in the woods.

R. L. Furniss
Entomologist

TABLE I: DIAMETER DISTRIBUTION OF INFESTED PINES BY GROUPS 1/

DBH (inches)	Number of Trees																					
	A*	B*	C*	D*	E*	F*	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	Total
6											1					1					7	9
8	8							1			4	1	2			2		4		3	9	34
10	5			1	1	2		1			6		1			4	1	3		9	16	50
12	8			2		1		2		1	6	1	2			3	1	3		13	12	55
14	8							3		1	1	1	3			5		3		6	8	39
16	3	1				2	2	2		1	7	2	3			6	2	8	1	5	2	47
18			1	1				3				3	4			6	2	9		7	2	38
20							1	5			1	3	2		1	8		9		1		31
22	1							3				2	1			2		2				11
24								3	1			1						2				7
26									1		1	1						1				4
28												1										1
30								1														1
40														1								1
Total	33	1	1	4	1	5	3	24	2	3	27	16	18	1	1	37	6	44	1	44	56	328

1/ Groups marked by asterisk* are white-bark pine. All others are western white pine.

MAP SHOWING LOCATION OF PINES INFESTED BY THE 1943-44 GENERATION
OF THE MOUNTAIN PINE BEETLE - WHITE RIVER AREA

LEGEND: B Trees counted and measured
5 "Red top" estimate